

... BS9 to one another into consideration. Since wireless telephone systems shall be realized in future according to the DECT standard, a synchronization of the base stations BS1 ... BS9 is effected in that a slave base station synchronizes to a wirelessly transmitted time slot structure of the master base station BS1 ... BS9. The information with respect to this time slot structure is stored in the base stations BS1 ... BS9 and is read using a base station control means (not shown) and is communicated to a broadcast means FE wherein such information is converted into corresponding, DECT conforming radio signals.

The invention is not limited to the particular details of the apparatus depicted and other modifications and applications are contemplated. Certain other changes may be made in the above described apparatus without departing from the true spirit and scope of the invention herein involved. It is intended, therefore, that the subject matter in the above depiction shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A method for synchronizing of base stations in a multi-cellular wireless telephone system, the base stations being connected to a communication system via trunk lines, comprising the steps of:

wirelessly transmitting synchronization information from the base stations and wirelessly receiving synchronization information at the base stations;

arranging the base stations at a distance from one another such that respective wirelessly received synchronization information is at least partially received by at least one neighboring base station to a base station that transmitted the respective wirelessly received synchronization information; and

controlling, with the communication system via the trunk lines, an initial wireless synchronization of all base stations in the multicellular wireless telephone system and further wireless synchronization during operation of the telephone system such that a respective base station is synchronized to the synchronization information transmitted from a neighboring base station to the respective base station;

placing all base stations into a reception condition;

wirelessly transmitting synchronization information that is stored in one base station of the base stations in response to start information communicated from the communication system to said one base station;

forming, after a reception of the wirelessly transmitted synchronization information with at least a predetermined level in one of the neighboring base stations to said one base station, receivability information in the one of the neighboring base stations and transmitting the receivability information to the communication system via trunk lines;

initializing, after reception of receivability information in the communication system, the one of the neighboring base stations by communicating control information via the trunk lines to synchronize to the wirelessly received synchronization information and to transmit synchronization information stored therein; and

repeating after a reception of receivability information from further base stations, both the synchronization to the respective wirelessly received synchronization information and the wireless transmission of synchronization information until all base stations are synchronized to respective neighboring base station.

2. The method according to claim 1, wherein the method further comprises the step of interrogating, given a reception

of at least two receivability information from at least two base stations in the communication system, the two base stations with respect to magnitude of reception levels of the wirelessly communicated synchronization information using level-measuring information communicated via trunk lines and using level result information; and initiating that base station of the two base stations that has the highest reception level of the wirelessly received synchronization information to synchronize to the wirelessly received synchronization information, being initiated by the communication system by communicating control information via the trunk lines.

3. Method according to claim 1, wherein the method further comprises the step of measuring, given a reception of the wirelessly transmitted synchronization information with at least a predetermined level in at least one of the neighboring base stations, a reception level of the at least one of the neighboring base stations and forming receivability information and level result information therein and communicating the receivability information and the level result information to the communication system in terrestrial fashion; and initiating that base station of the at least one of the neighboring base stations that has a highest reception level of the wirelessly received synchronization information to synchronize to the wirelessly received synchronization information, being initiated by the communication system using terrestrial communication of control information.

4. The method according to claim 1, wherein the method further comprises the step of implementing resynchronization of a respective base station during operation in a sequence determined in the initial wireless synchronization, utilizing existing master-slave relationships of the neighboring base stations to the respective base station.

5. The method according to claim 4, wherein resynchronization of the respective base station is one of temporarily implemented, regularly implemented or constantly implemented.

6. The method according to claim 1, wherein the method further comprises the step of providing a transmission unit and line termination units in each of the base stations, the transmission units and line termination units being formed by message switching units that are coupled via a respective trunk line to a plurality of lower-ranking units representing individual transmission channels, each of the transmission units and line termination units having a reception unit that evaluates signals supplied thereto and that edits said signals for further processing, and each of the transmission units and line termination units having a respective switching unit that precedes the reception unit and is coupled to the trunk line, said respective switching unit through-connecting one of the trunk lines dependent on a control signal, and each of the transmission units and line termination units having a watchdog unit coupled to the trunk lines that detects an occurrence of transmission signals of the lower-ranking units on a respective trunk line and outputs corresponding control signals, and each of the transmission units and line termination units having a selection unit coupled to the watchdog unit, to the switch unit and to the trunk line, said selection unit selecting one of the trunk lines according to predetermined criteria dependent on the control signals from the watchdog unit and generating corresponding setting signals for the switching unit and for the lower-ranking units.

7. A method for synchronizing of base stations in a multicellular wireless telephone system, the base stations being connected to a communication system via trunk lines, comprising the steps of:

wirelessly transmitting synchronization information from the base stations and wirelessly receiving synchronization information at the base stations;